Sargent Cherry (*Prunus sargentii* 'Columnaris') – Narrated by Ned Friedman

I'm William Friedman. I go by "Ned," and that's what everyone calls me. I'm the Director of the Arnold Arboretum of Harvard University, and I'm also an evolutionary biologist who is a professor at Harvard University.

So, one of the most amazing things about being in an arboretum is that a lot of people think that trees just grow themselves. You come here, you see these beautiful trees, you don't have to plant them every year. It's not like putting in a new set of bulbs for the spring at many botanical gardens. And I think it's fair to say very few people have any idea how much it takes, in terms of effort and in the breadth of knowledge, to keep a single tree alive, let alone 16,000 trees and shrubs, and woody vines (or lianas).

So if you think about just your beautiful flowering cherry tree, the Sargent cherry, we all gather around it when it's at its peak in the spring, and it's just a cloud of these beautiful light pinks. And you might wonder, "Well, what does it take to grow this tree? Does it just flower every year? And we just enjoy it, and someone mows the lawn under it?" The answer is no—it's really complicated stuff. A lot of horticultural science goes into this, a lot of data collecting. So we have IT experts, GIS experts. I like to think that if you really understood how much goes into just keeping one tree alive, it would deepen your sense of what an almost sacred place an arboretum is.

For example, to keep our trees alive across this 281-acre property, we have a team of some of the world's most accomplished horticulturists. They have all kinds of specializations. Some might be specialists in pest control and understanding plant diseases. Others might be really expert in pruning technique, and how we actually make sure to prune the different species to create the various sizes and categories of branching that you see that make trees quite beautiful. Others would be soils experts. It's not trivial to grow plants in the middle of Boston on old farmland, which is not great soil, and make them happy for 100 or 120 years. So, we bring this team of horticulturists with all of their expertise together—and there are probably about 20 on this team—just at the Arnold Arboretum, who are charged with the care of our plants.

But then we have records. Every tree has a story here. It may have been collected, for example, like the Sargent cherry, it's from Japan. It's made a journey from Japan all the way—probably across an ocean and a continent—to Boston. At some point, a long time ago, someone propagated this very tree, and someone had to dig a hole and put it in the ground, and we've been taking care of it, as I mentioned. But we have data on that. We know where it came from, we know who collected it. And some of that data actually sits on the wonderful little tags that you see attached to every tree.

But in this day and age, all of that data resides on computer systems. We have a whole floor of plant records experts who understand GIS, geographic information systems. And so we have a whole floor of experts who actually keep track of the data. And every time we go out and check on these trees, someone is recording plant health, somebody is making sure that if there are new observations about when things are in flower or a variety of other things, these are recorded. And

then behind that, we have a set of scientists. Not only our own scientists here at Harvard, but scientists from around the world who might be studying this tree.

So this tree sits at the intersection of all kinds of worlds. Worlds of horticulture, worlds of bioinformatics and computer systems, mapping technologies, climate change science, horticultural science. It's endless. It's just one organism interacting with hundreds and hundreds of people.